

In the Claims:

Added text is underlined and deleted text is struck through.

1. (canceled)

2. (currently amended) A method for routing messages from a source node (S) to a destination node in a dynamic network, said source node including a routing table, each row in the routing table representing a possible destination node (D) for a data message transmitted from the source node (S), and each row in the routing table including one probability value $p(k,D)$ for each neighbor node (k) of the source node (S), the method comprising:

updating the probability values with quality measurements taken each time a data message is sent from the source node (S) to the destination node (D);

routing a tunable predefined percentage of the messages by choosing the neighbor node with the highest probability value in the row for a destination node (D) in the routing table; and

routing the other messages by distributing the messages among the neighbor nodes according to the probability values given in the same row in the routing table. ~~The method of claim 1~~

wherein the probability values of using a specific neighbor node (k) of the source node (S) for transmitting data from the source node (S) to the destination node (D) are updated according to the following expression:

$$\frac{p(k, D)(old) + \delta}{1 + \delta}$$

where δ represents the measured quality of a path through the node k, and $p(k,D)(old)$ represents the old probability value amount of using the node (k) for transmitting data from the source node (S) to the destination node (D), and the remaining probability values in the routing table are adjusted in such a way that all the probability values in each row of the routing table sum to one.

3. (previously presented) The method of claim 2 wherein the quality measures of the path taken are represented by hops and/or time delays.

4-7. (canceled)

8. (currently amended) A method for routing messages from a source node (S) to a destination node in a dynamic network, said source node including a routing table, each row in the routing table representing a possible destination node (D) for a data message transmitted from the source node (S), and each row in the routing table including one probability value $p(k,D)$ for each neighbor node (k) of the source node (S), the method comprising:

updating the probability values with quality measurements taken each time a data message is sent from the source node (S) to the destination node (D);

routing a tunable predefined percentage of the messages by choosing the neighbor node with the highest probability value in the row for a destination node (D) in the routing table;

routing the other messages by distributing the messages among the neighbor nodes according to the probability values given in the same row in the routing table; and ~~The method of claim 1 further comprising~~

at the detection of a gain of a new neighbor node (j), for both the new neighbor node (j) and the source node (S), computing one route quality rating ($RQR(D,j)$ and $RQR(D,S)$) for each possible destination node (D), based on the maximum probability value and minimum probability value for each destination node (D), and for all possible destination nodes (D), computing a new probability value for the new neighbor node based on the route quality rating for the neighbor node (j) and the source node (S) and the number of its associated neighbor nodes.

9. (previously presented) The method of claim 8 wherein the route quality rating is equal to a maximum probability value minus a minimum probability value.

10. (previously presented) The method of claim 9 wherein the new probability value for the new neighbor node (j) is:

$$\begin{cases} \frac{1}{n+1} + \left(1 - \frac{1}{n+1}\right)(x-y) & \text{if said expression} > 0 \\ 0 & \text{otherwise} \end{cases}$$

where x is the quality rating of the new neighbor node, y is the quality rating of the source node in question and n is the number of neighbor nodes before gaining the new neighbor node.

11-12. (canceled)

13. (currently amended) A method for routing messages from a source node (S) to a destination node (D) in a dynamic network using a routing table having a probability value p(k,D) for each neighbor node (k) of the source node (S), the method comprising:

routing a tunable predefined percentage of the messages to a neighbor node having a highest probability value in a routing table;

routing a remaining percentage of messages among neighbor nodes according to a probability value associated with each neighbor node in the routing table; and

updating the probability values with quality measurements taken each time a data message is sent from the source node (S) to the destination node (D).~~The method of claim 12~~

wherein the probability values of using a specific neighbor node (k) of the source node (S) for transmitting data from the source node (S) to the destination node (D) are updated according to the following expression:

$$\frac{p(k, D)(old) + \delta}{1 + \delta}$$

where δ represents the measured quality of a path through the node k, and p(k,D)(old) represents the old probability value amount of using said node (k) for transmitting data from the source node (S) to the destination node (D), and the remaining probability values in the routing table are adjusted in such a way that all the probability values in each row of the routing table sum to one.

14. (previously presented) The method of claim 13 wherein the quality measures of the path taken are represented by at least one of hops or time delays.

15-19. (canceled)

20. (currently amended) A method for routing messages from a source node (S) to a destination node (D) in a dynamic network using a routing table having a probability value $p(k,D)$ for each neighbor node (k) of the source node (S), the method comprising:

routing a tunable predefined percentage of the messages to a neighbor node having a highest probability value in a routing table;

routing a remaining percentage of messages among neighbor nodes according to a probability value associated with each neighbor node in the routing table; and
~~The method of claim 11 further comprising~~

at the detection of a gain of a new neighbor node (j), for both the new neighbor node (j) and the source node (S), computing one route quality rating ($RQR(D,j)$ and $RQR(D,S)$) for each possible destination node (D), based on the maximum probability value and minimum probability value for each destination node (D), and for all possible destination nodes (D), computing a new probability value for the new neighbor node based on the route quality rating for the neighbor node (j) and the source node (S) and the number of its associated neighbor nodes.

21. (previously presented) The method of claim 20 wherein the route quality rating is equal to a maximum probability value minus a minimum probability value.

22. (previously presented) The method of claim 21 wherein the new probability value for the new neighbor node (j) is:

$$\begin{cases} \frac{1}{n+1} + \left(1 - \frac{1}{n+1}\right)(x-y) & \text{if said expression} > 0 \\ 0 & \text{otherwise} \end{cases}$$

where x is the quality rating of the new neighbor node, y is the quality rating of the source node in question and n is the number of neighbor nodes before gaining the new neighbor node.